



Volunteer Stewardship Exchange

THE NATURE CONSERVANCY OF THE FLORIDA KEYS

SPRING 2003

New Water Testing Program Helps Monitor Keys' Marine Health

For nearly 15 years, The Nature Conservancy has worked to protect the Florida Keys' near-shore ecosystems and the only coral reef tract in the continental United States. In August 2002, the Conservancy launched Florida Keys Watch — a program that tests canal water quality in the Keys in an effort to document bacterial and viral contamination and its source. "Due to the Keys' tremendous population growth over the past few decades, wastewater management has become a critical issue," said Jody Thomas, director of the Conservancy's South Florida/Florida Keys Program.

Wastewater treatment in the Keys is conducted by antiquated on-site systems or, even worse, by cesspits. "In the past, we thought these inadequate systems were causing some of our water-quality problem by contaminating canal waters and started Florida Keys Watch to find out in a definitive way," said Thomas.

Florida Keys Watch is composed of three parts. The first part of the program consists of monitoring water canals every two weeks. "Since August, program volunteers have helped monitor 17 different canals throughout the Keys," said Brad Rosov, the Conservancy's marine conservation program manager. "Their work collecting data and water samples has really been the backbone of

the program." Volunteers helped gather information such as dissolved oxygen, salinity and temperature, and sampled each site for three months to determine the presence of enterococcus bacteria — the best indicator of water quality levels according to the U.S. Environmental Protection Agency (EPA).



Florida Keys Watch volunteer collects water sample for further testing.

"Testing for enterococcus bacteria is a crucial part of the program's research," said Rosov. "If viruses are found, further analyses will be conducted to determine whether or not people are the source of these viruses." In the future, six of the sites with the highest levels of enterococcus bacteria will be tested for viral pathogens during the

dry and wet seasons to determine any seasonal differences.

The second part of the program consists of routine sampling of the canals after heavy rainfall. Scientists believe that after heavy rains, bacteria levels rise due to the flushing of these contaminants through the limestone.

To date, program research has shown a noticeable increase in bacteria levels after heavy rains. For example, in December samples were taken after heavy rainfall and showed that nine of the 17 canals had elevated bacteria levels, up to 88 times the recommended guidelines set by the EPA.

Finally, the program focuses on sampling canal systems within specific neighborhoods. Currently, stations in Sugarloaf Shores and Key Largo Trailer Village are being sampled every two weeks. Canal systems will be studied and samples from each neighborhood will be analyzed for both enterococcus bacteria and viral pathogens.

"The work of Florida Keys Watch volunteers has greatly helped the Conservancy and other local agencies better protect the Keys' fragile ecosystems," said Thomas. To learn more about the Florida Keys Watch program, contact Brad Rosov at (305) 745-8402.



The mission of The Nature Conservancy is to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive.

The Volunteer Stewardship Exchange is a service of The Nature Conservancy of the Florida Keys that supports organizations working to protect the natural environment.

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Illustrations by Harry McVay

Director's Letter

Since I moved to the Florida Keys, one of my favorite volunteer programs has been the Florida Keys National Marine Sanctuary's Team OCEAN. I remember the first time I took my boat out into the reef. Team OCEAN volunteers must have noticed I was unsure about how to get around the reef and came right over to show me the best way through. Even though I know where I'm going these days, I love to see them in action.

This issue's cover story talks about our new efforts to further protect the Florida Keys. The article describes the Florida Bay Watch Program's transformation into Florida Keys Watch. Thanks to your work monitoring near-shore waters for nutrients, we have a strong baseline of information that describes phosphorous and nitrogen levels along the Keys.

GreenSweep, the Conservancy's invasive plant removal program, is continuing its excellent work and getting really "hot" these days. Read all about our new direction and don't forget to bring a friend with you the next time you volunteer.

Please take a look at the list of volunteer opportunities on the back cover and join us this summer for some fun work. Each of your contributions adds something important toward the protection of the Keys' resources. On behalf of the Volunteer Stewardship Exchange, I thank you for making our work possible.

Sincerely,

Jody Thomas, director
The Nature Conservancy's South Florida/Florida Keys Program

Volunteers Use Muscle in the Absence of Fire



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Volunteers help remove fuels to prevent wildfires.

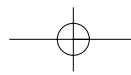
In natural areas near neighborhoods, volunteers have been rolling up their sleeves to protect the environment and local homes by using an alternative to prescribed fire — manual fire thinning.

Land managers use this tool to mimic the ecological effects of prescribed burns. By imitating the effects of prescribed fire, this technique helps prevent the occurrence of wildfires by reducing the amount of fuel in areas near homes.

Manual fire thinning consists mainly of trimming and removing low palm fronds and branches, which can carry a groundfire up into higher branches.

Local volunteers and two AmeriCorps teams spent many hours cutting and hauling to help protect more than 30 homes and three churches this season.

To learn more about how you can help, call Alison Higgins at (305) 745-8402.



On-the-Water Education: Team OCEAN

Team OCEAN (Ocean Conservation Education Action Network) is the Florida Keys National Marine Sanctuary's (FKNMS) on-the-water education and information program. The program began in 1995 with one vessel in Key Largo and expanded to the Middle and Lower Keys with two additional vessels. Volunteer teams use FKNMS vessels to visit popular reefs in these areas and to educate boaters about the importance of the natural resources in the sanctuary.

Using interpretive skills along with a variety of printed materials, Team OCEAN volunteers help promote a better understanding of the Keys' natural resources to visitors and local residents, and ensure FKNMS' presence on the water. The team groups are composed of two volunteers, a vessel operator and an interpreter. The operator is responsible for the safe passage of the vessel, while the interpreter's job is to initiate a conversation with other boaters.

Team OCEAN program coordinators pride themselves on training volunteers who can accomplish the program's goals. Training includes vessel operation in proximity to other boats, proper interpretation techniques, as well as knowledge about the sanctuary and its resources.

Helping volunteers feel comfortable with their knowledge and understanding of the sanctuary's mission and its resources is a priority when training new volunteers. This allows volunteers to further the program's work and to also enjoy the time they spend on the water.

Future plans for the program include the purchase of additional vessels for the Islamorada and Marathon areas.

If you enjoy being out on the water and would like to become a member of Team OCEAN, contact Amy Massey in the Upper Keys at (305) 852-7717, ext. 39, or John Nazzaro in the Lower Keys at (305) 292-0311, ext. 27.



© FKNMS

Team OCEAN volunteers help promote a better understanding of the Florida Keys' natural resources

VOLUNTEER SPOTLIGHT — Howard Waugh



© FWC

Howard Waugh

Mobil Foundation Volunteer Program grant to help support queen conch research. "Howard has been, and continues to be, a huge asset to our research program," said FWC Biologist Bob Glazer. "This grant is just icing on the cake."

Since teaming up with FWC, Howard has logged more than 200 hours of volunteer time, including the use of his boat to help transport near-shore conch to their new

homes out on the reef. When Howard Waugh started volunteering with the Florida Fish and Wildlife Conservation Commission (FWC), biologists had no idea that in addition to his work surveying plankton and transplanting conch, Howard would receive a \$500 Exxon-

homes out on the reef. According to Howard, the conch project keeps him busy with "lots of swimming, snorkeling and diving, and even a little lab work." Howard lives in Marathon and thinks it's the perfect place to do the things he loves best. When he's not out wrangling conch with the project team, Howard can be found fishing or diving in the family boat. Lately, he has begun practicing his refurbished buffet clarinet.

After college, Howard was a first lieutenant in the Army from 1961 to 1964. He then received his master's degree in industrial administration from Carnegie Mellon University in 1965 and went to work for Exxon for 30 years. While working for Exxon, he lived in South America for a number of years. This proved to be no problem for Howard, since he speaks fluent French, Portuguese and Spanish. Howard is 63 years old and has two children.



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Volunteer Opportunities

Join us this spring and summer for some fun work. Each of your contributions adds something important toward the protection of the Keys' resources.

- Help repopulate long-spined sea urchins by joining the *Diadema* Restoration Project. Your efforts will help replenish coral reefs with new growth. For more information, contact Brad Rosov at (305) 745-8402, ext. 104.
- Jump into the Coral Reef Classroom and help teach today's youth about the importance of the coral reef and how to enjoy its beauty without damaging it. Classes will be held in Key West and Key Largo. For more details, call Ivy Kelley at (305) 852-7717, ext. 36.
- Calling all boat operators. We need your assistance throughout the Keys for various projects. To learn how you can help, contact Stevie Levine at (305) 745-8402, ext. 101.